

ABSTRACT

PROTOTYPE DRAMATIC STAGE LIGHTING CONTROL WITH BLUETOOTH HANDPHONE BASED MICROCONTROLLER ATmega 16

By : RINESTU ADHI
Nim : 08507131003

The final project aims to create a dramatic stage lighting control devices with Bluetooth media are more efficient than current lighting control equipment. The device is controlled by a microcontroller ATmega 16 which is connected with the EB500 Bluetooth module as a receiver and relay commands from the mobile phone as an activating stage lights.

This tool is made in several stages, namely, (1) Identification of Needs, (2) Needs Analysis, (3) Design System, (4) Hardware Design, (5) Design Software, (6) Preparation and (7) Testing Tool . Drama stage lighting control device with Bluetooth is working with the media is controlled by an ATmega16 microcontroller IC with control systems that are created using the C language Programming language created using software (CodeVision AVR). Hardware that supports consist of a series of power supply, EB500 Bluetooth module as a data receiver, IC ULN3803 as relay driver, relay for activating the lights and as a processor ATmega16 microcontroller. Mobile as a controller using the brand Sony Ericsson K608i with the type of Java software applications Avic B Controller.

Having performed experiments and analyzed it can be seen that the hardware has been successfully fabricated using minimum system ATmega16 microcontroller combined with other supporting instruments. The software has been successfully designed using the C programming language using CodeVision AVR decompile. The performance of this instrument as a whole has been in accordance with a predetermined function, which is well able to control the stage and lighting effects dramatize the appropriate criteria for lighting the stage drama. In a control tool is also found flaws in the software used in mobile phones that have come out of the program first before sending the next command and distance for lighting control only about 7 meters. This tool has received validation from the LB. Suraja a dance coach and administrator at Prambanan Ramayana Ballet who claimed this tool is sufficient to meet criteria and developed as it is possible to control lighting in a real drama.